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ADYNAMIC TYPHOID FEVER.

[The following, from M. Chomel's recent work on Typhoid Fever, is a summary of his remarks on the adynamic form.]

This form was the most frequent, adynamia being marked in twenty-six out of forty-two fatal cases: in ten of these, adynamic symptoms were present throughout, and in sixteen at the termination only. The predominant symptom is muscular debility, which may gradually simulate paralysis. These patients, with every appearance of strength, can neither lie down nor rise up in their beds without help, or even turn on one side. Towards the termination they lie immoveable, and after many hours are found in precisely the same position in which they had been left. There is commonly great mental debility, commencing with early stupor. In bad cases, or at an advanced period, the patient does not answer questions which are put to him, and his unmoved features show that he has not understood them; after a loud question he may direct his eyes momentarily towards the speaker. Headache diminishes as adynamia increases, and is replaced by wakefulness, or constant unquiet dreams. The mouth is covered with a thick layer of dry mucus; great meteorism; often no sensibility on pressure; stools generally fœtid and involuntary; sloughing of the parts pressed upon; urine and sweat fœtid; petechiæ; skin at first warm and dry, afterwards cold; pulse feeble, trembling, at first rapid, latterly slow. This state sometimes lasts long.

Diagnosis. This is sometimes extremely difficult. It is prudent not to give a decided opinion during the first three or four days; for, when the symptoms are not very decidedly marked, they differ little from the precursory fever of many eruptive diseases, as smallpox, scarlatina, measles, of some catarrhal affections, or latent visceral inflammations. The long duration of the febrile condition is an important characteristic. Whenever febrile symptoms, which cannot be referred to any appreciable lesion, last eight or ten days, there are strong grounds to presume that the glands of Peyer are diseased; and when, on the other hand, a febrile disease, of the nature of which we are doubtful, it is not this affection. Between the sixth and twelfth days, symptoms which clear up the diagnosis generally appear, such as meteorism, typhoid eruption, stupor, epistaxis, hæmorrhage from the bowels. At a later period still, there is less difficulty; for, even if the symptoms during the first and second periods have been absent, those which belong to the third remove all doubts; these are intestinal hæmorrhages, sloughing, involuntary stools, and other marks of adynamia.

Prognosis. Few diseases are so fatal. Out of 147 cases in the clinical wards of the Hotel Dieu, between 1828 and 1832, forty-seven died, or one in three. Though a mortality of one in three is a very large proportion, any inferences unfavorable to the treatment of fever should for many reasons be made with caution and charity. The mode in which patients are distributed to the various hospitals in Paris, is brought forward as one excuse for such fatality. All the hospitals being under the direction of government, a central board of medical men is appointed to examine the patients who apply for relief, and to distribute them among the different hospitals. This board meets near the Hotel Dieu, so that the severest cases of fever are often sent there, as it is the nearest place. M. Chomel is also the professor of clinical medicine, and the most serious cases are sent to the clinical wards. These reasons would account for a greater apparent mortality than under other circumstances, if we did not find that during several years, whilst M. Chomel was physician to La Charité, the mortality in about the same number of cases was rather greater. M. Louis founded his "*Recherches sur la Gastro-entérite*" on 138 cases of fever treated by M. Chomel, and out of these were fifty deaths. The average of one in three seems to be therefore independent of these local causes.

Fever is less dangerous in patients under eighteen years of age, and more dangerous after the age of forty. No appreciable difference is observed in regard to sex. Previous feebleness of the system does not appear to act unfavorably. Two out of four patients who attributed fever to moral causes of depression, died. Of sixteen patients who admitted that they had taken stimulating drinks at the commencement of the attack, three only died. M. Chomel concludes that those cases are most dangerous where the attack was sudden. The tables given, however, indicate the opposite, the mortality being rather less than one in three where the attack was sudden, and slightly above one in two where there were premonitory symptoms (p. 433). There is probably some numerical error. If during fever there is a decided remission, followed by an aggravation of the symptoms, the termination is generally fatal. There is less danger when the form of the disease does not change: the ataxic is in such cases the most fatal. Complicated cases are very fatal: thus, of thirteen cases of inflammatory adynamia, eight died. Many symptoms, when they become intense, are important in the prognosis. When delirium is early and violent, it is very unfavorable. Of forty-two fatal cases, twenty-two were violently delirious. When it consists in a dreaming state from which the patient can be roused, there is less danger. Of eighty patients who recovered, twelve had this mild delirium. Involuntary evacuations, when passed without consciousness, constitute a bad sign. Of thirty cases in which this symptom was present, thirteen died. Constant and general twitching of the tendons is highly unfavorable. In five cases with general convulsions, death was speedy. Coma is one of the most fatal symptoms; it should be distinguished from stupor, in which the patient's attention can be roused. Of seven patients with intestinal hæmorrhage, six died. M. Chomel does not think deafness unfavorable. The expression of the face is important: when ema-

ciated and shrunk (*facies Hippocratica*), death is at hand; whilst improvement in intelligence of expression is often the first sign of amendment. If the pulse exceeds 120 or 130 it is bad, when 150 or 160 death is near. When it becomes slow after having been rapid, without symptoms of improvement, it is a fatal symptom, unless proper means to relieve the patient are employed. Perforation of the intestines, and erysipelas of the face, are generally fatal complications. The danger of inflammation of the lungs is in proportion to its extent and to the general condition of the patient. When it occupies a considerable portion, or the whole of one lobe, and is not arrested, it is fatal, even before it passes into the second and third stage. Circumscribed pneumonia is often discovered in those who have extensive suppurations on the sacrum, and is dangerous. As pneumonia is often latent, considerable attention should be paid to the lungs. In three patients inflammation of the larynx and epiglottis took place, and was fatal. The injurious effects of sloughs on the sacrum, heels, &c. have been exaggerated. In seven cases, only three died, and in those which recovered the extent of the ulcers was truly alarming. Abscess in the external parts was observed in six, all of which recovered. They were not found in parts subjected to pressure.

Treatment.—When there is stupor, unusual prostration of strength, weakness of the pulse, faintness in the sitting posture, and involuntary passing of stools and urine, we must use bitters and aromatics, such as bark, chamomile and sage in draughts, lavements, baths, and external applications, with wine, camphor and ether: if the symptoms increase, the doses must be larger, and the wines of Spain given instead of those of France. Extract of bark, by the mouth and in lavements, in doses of one or two ounces a day, is given by M. Chomel in preference to quinine, if the stomach will bear it, as he doubts whether the sulphate of quinine contains all the tonic powers of bark equally with its febrifuge and antiperiodic principles. In this state tonics and excitants, instead of aggravating the lesions of the intestines, exercise a favorable effect upon them. The intestinal ulcers are analogous to cutaneous ulcers in similar subjects, which are improved by stimulating applications. In three instances where the patients died during the tonic treatment, the ulcers in the intestines were evidently cicatrizing. The tonic treatment was followed in nine patients, all of whom when it was commenced were in an alarming state of prostration, and six of these recovered. It is important that tonics should be given before the strength is too much exhausted, and yet not during reaction. The exact time must be determined at the bed-side, as no exact rules can be laid down. If delirium or other signs of cerebral congestion exist, wine should not be given, as it almost inevitably aggravates the symptoms. M. Chomel commonly gives wine in spoonfuls, at first once or many times daily, increasing the quantity as debility increases. The lighter wines he gives with other drinks, in the proportion of a fourth, a third, or half; the stronger wines pure. In some cases the benefit is immediate: the pulse rises, the heat of the skin increases, and the expression improves. Ether is particularly useful when it is necessary to raise the powers rapidly, but its action is transient; it

should be given with bark. Camphor is only employed by M. Chomel in lavenents with bark, when debility is great. Bark in infusion, decoction, or still better only macerated in water, and sweetened with syrup of lemon, is one of the best drinks. Also infusions of serpentaria, cascarrilla, and sage. The tonic treatment is rarely necessary in the first stage, and should never be tried then except with great reserve. In the second and third stages we may employ it with more confidence and energy. Several excellent cases are detailed in which success followed this treatment in apparently hopeless cases. M. Chomel mentions the application of revulsives and of warm and cold baths, but states nothing decidedly as to his own opinion of their efficacy.

THOUGHTS ON THE USE OF COLD APPLICATIONS IN FEVER AND INFLAMMATION.

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—Observing in your useful Journal for the first of November, 1836, an article “on the use and abuse of cold applications,” by Dr. Graves, of Dublin, I feel induced, I hope by sincere motives, to offer some views, which are the results of long observation and reflection on this subject. It seems to be the more required at this time to review the topic, as the practice has become a very common one in this country, in fevers, and indeed many affections with determinations to the head, and, as I have thought, too often in an indiscriminate manner.

The writer appears to have some good views of the subject when he says, “whether applied to reduce local inflammation in any part of the body, or to cool the scalp in determinations to the head, cold lotions, as ordinarily employed, do infinitely more harm than good.” He justly complains of the *manner* in which this application is commonly made, and recites an instance in opposition to the *principle*, in the fact of the great utility of warm lotions to the head in an epidemic influenza, in 1832, at Dublin, which was pretty constantly attended with “intense pain of the head.” It appears the writer has not pointed out any pathological discriminations in which cold or warm lotions may be useful or hurtful, but all is overcast with doubt.

That cold is directly a tonic to the human tissues under all circumstances, whether applied by cold water or cold air, ought not to be denied; meaning all degrees below what are found to be agreeable, and necessary to eliminate the excess of heat from the healthy system; that is, about 60° of F.—admitting, however, a range of five degrees each way, to suit idiosyncrasies. Whenever this agent appears to be debilitating, it is in an indirect manner, by impeding the nervous force due to the tissues, as one of the effects of its tonic and constricting influence on the vital solids. If not carried too far, so as entirely to expel the vital influence, the instinctive repulsive powers will prevail, and restore the inability of capillary function induced by the cold, although the organic functions may still suffer injury. The antecedent stimulations in-

duce an inordinate and very persistive state of action. In every instance of this kind the functions of the system will show an elevated action, which oftentimes arises to a morbidly dangerous state.

It may be asserted, perhaps with much propriety, that every cause of disease, say fevers and inflammations if you please, except the mechanical lesions of tissues, consist of stimulants and irritants, of which cold is a prolific one. As the recuperative powers re-establish the derangements made by the first impulses of the causes, every secondary phenomenon indicates a tonic state of the organism universally. In every state of fever and inflammation, which indeed are very similar, there exists a morbidly tonic state of the tissues. Febrile heat is a manifestation of an excess of capillary action.

These theses have been advanced in order to expose the pathological state of the system, only just so far as to raise the question, whether cold, so often a co-agent in the production of disease, can philosophically be applied for the removal of the primary diseased condition. The rational inference would be, it could not. But, as every thesis must be established by rigid observation and facts, we will attempt to draw a line of discrimination between the pathological condition in which cold applications may be useful or hurtful. As physiologists, we have a right to consider cold an active agent, if not as philosophers.

It must, however, be further noticed, that every fever, either epidemic, endemic, or sporadic, consists of a universal affection, always having determinations to some organ or tissue, M. Broussais to the contrary notwithstanding. These concentrations in fever, are a mere accumulation of the disease in the part, consisting first in a tonic, then in a congestive state of capillary veins, and soon followed by an injected state of capillary arteries, which constitutes the state of inflammation, with its sequences.

If it be true, that the cure of disease consists in the use of *contraries* of its production, we should hesitatingly be led to look to cold as a therapeutic agent, especially for the diseases of this climate. Yet we will not deny but it may be inducted to some advantage in *certain conditions*, but not as an agent adapted to the removal of the morbid habit, which ought to engage our principal attention.

The topic of the application of cold water, not only to the head, but to the entire surface, in fevers, was rigidly canvassed more than forty years ago, to my full recollection. I never could be learned enough to comprehend the rationale of its utility for the removal of the derangements made by acute disease. I had used it to my satisfaction, and have seen its use pretty extensively by others; and unless I am unconsciously deceived, the results have been far oftener injurious than useful. It will often relieve heat and pain of the head, and seem soothing when applied to the hot surface; yet, these phenomena return with greater force, and remain more persistive. My meaning is, whenever used in the early stage of fever, or even at its height, before the general morbid state and local injury are *essentially* removed by other therapeutic measures, it is very sure to do injury to the case.

I believe its extensive use to the surface has been abandoned general-

ly in this region, though never greatly used ; and yet its application to the head is too extensively practised. If useful to the head, why not to other parts ? It seems to be continued, like early blistering, more from fashion and precedent, than from its utility. If the case grows worse, it will not do to say the intended remedy had a share in it, for perhaps few but Steam Doctors might approve of the sentiment. Should I be telling too much by saying, I have seen blistering and cold water alternately and even simultaneously applied to the head in fever ?

This intended remedy, ice or cold water, has not only been used in the early stage of the more ardent fevers, but in the low state of typhus, when the surface was cold, and the heat of the head externally quite inconsiderable, and continued until the head became very cold externally. Yet there is, in such cases, a concealed inflammation going on in the cerebral tissues, as well as in those of the abdomen, and often greater, which will destroy, if not removed by other means. Morbid action in such conditions ought to be solicited to the surface universally, and then met by the proper therapeutic remedies, instead of being repelled to the interior, where it will destroy the organism. The warm bath, and other mild methods of applying caloric to the surface, go far to answer this indication.

The consistent conclusion must be, that so long as any internal congestive or inflamed state of the organs exists in any considerable degree, with unequal action, and coldness of any part of the exterior, the application of cold to the surface, as well as internally, will always be injurious in every habit of disease.

Notwithstanding, it will not be insisted that these applications are never useful, in any state of disease. In the instance of high fever, with a strong determination to the head, and after the proper evacuating remedies have been carried to their full extent, as concluded by the prudent adviser ; and further, as the internal inflammation may have been principally removed, and whilst there yet remains a state of irritation in the tissues, with equal heat on the surface, and much in the head ; in such cases I have known cold water, moderately applied by sponging, or linen cloths, of very considerable advantage. The light delirium often attending this state will be dissipated as if by a charm ; whilst the coma or the raging delirium of the preceding state, and under different circumstances, are sure to become more fixed by it. It was in cases much like those just now mentioned, that Dr. Southwood Smith so well succeeded with the cold dash. It appears he did not use it until he had carried the evacuant and anti-pyretic treatment to a full extent.

It seems that as cold water absorbs the excessive heat, it relieves the tissues of a portion of irritation ; and, again, as the internal vascular tissues have been relieved of a portion of their burthen by the antecedent evacuations and internal venous absorptions, the tonic influence of cold now aids their contractions, and assists in promoting further absorption of the residue, which under the reverse condition would only have served to fix them stronger. The free expanded capillary action in fevers of tropical climates, oftener requires it.

So, likewise, in the instance of scarlatina, where the eruption is vivid,

with high heat, and even inflammation internally, yet there having been copious venesection, I have known cold water, applied and continued on the entire surface, afford much relief, and appear to shorten disease. Yet I should never advise it under the reverse circumstances; but rather the warm bath. After all, the cases that imperiously demand cold applications in this climate are rare; whilst those which require external warmth are numerous.

Furthermore, when cold water or ice has been useful in the instance of strictured hernia, it is after free evacuations of blood and sweats. The cold now condenses the intestinal gases, and also the sanguineous gases and expansion of fluids, as well as affords energy to the now exhausted tissues to resume their natural positions. Yet, this ought to be esteemed a very doubtful remedy, because the discriminations are difficult.

Amherst, Mass. Nov. 23d, 1836.

Respectfully yours,
J. A. GALLUP.

FRACTURE AND DISLOCATION OF THE SIXTH CERVICAL
VERTEBRA.

To the Editor of the Boston Medical and Surgical Journal.

THE case of Dr. Strobel, of Charleston, S. C., copied into the Journal of the 7th inst. reminds me of one that came under my notice a few years since. Though the facts are in many respects similar, they are interesting to the physiologist, and are, perhaps, worth preserving. On turning to my note book, I find the following entry made of the case at the time.

J. N. (of Shrewsbury), aged about 50, a stout, muscular man, weighing 220 lbs., on the 16th of November, 1830, was riding on the fore end of his ox cart, loaded with a quantity of slabs, when his team took fright and ran violently. As they were turning round a corner in the road, in attempting to jump from the cart his foot slipped, he lost his balance, and fell. He stated that he came with his shoulders and back of the neck upon the ground; the cart striking him on the hip, doubled him over, and at the same moment capsized and left part of the load resting on him. Several persons happened to be near, who immediately removed the timber that confined him in this appalling situation, and he was soon able to speak. The accident happened at 6 o'clock in the evening, and about one hundred rods from his house, to which he was immediately conveyed, and I saw him in twenty or thirty minutes after. He then had no power of motion, nor sensation in any part below the middle of the breast—could move the arms a little, though there was inability to direct their movements to any particular point. Respiration was somewhat embarrassed, performed principally by the diaphragm—possessed his reason perfectly—spoke but little, but tolerably distinct—pulse regular, rather feeble. At 20 minutes past eight, he suddenly began to fail—pulse sunk—slight spasm of the arms—breathing after a while became

stertorous, and he expired at nine o'clock. Ten minutes before death, pulse became hard, full and slow.

Seventeenth, at one o'clock, P. M., examined the spine at the place of injury. Externally, large contusion on back of neck at top of the shoulders. On cutting down to the spine at this point, a large quantity of extravasated blood flowed from the spinal canal and the parts about the wound. Found the spinous and transverse processes of the sixth cervical vertebra separated from the body of the bone and broken into several pieces. The body of the vertebra was dislocated forward, so far as to crush the spinal marrow over the posterior edge of the body of the vertebra below. It is remembered that the patient referred to his back, some inches below the injury, as the seat of all his sufferings; and also that there was priapism.

The phenomena in this case were not noted with so much minuteness as might be desirable. Its publication was not thought of at the time. Though such accidents are always melancholy and afflicting in the extreme, yet if they are carefully observed, they often serve to illustrate important principles of the laws of vitality. And this case, with others, corroborates the principle first developed by Sir Charles Bell, that the respiratory system of nerves possesses a peculiar vitality independent of the voluntary and sensitive nervous system: consequently, that life will continue, while the integrity of the *medulla oblongata* and so much of the *spinal marrow* as gives origin to the spinal accessory and phrenic nerves, is maintained, notwithstanding other parts of the nervous system may be dead.

In this case, all was dead to sensation and voluntary motion below a line extending across the middle of the breast. The muscles of the arms were paralyzed, though the skin was sensible to pricking, and their irregular movements were performed only by the action of the muscles of the shoulders. The injury being below the origins of all the essential respiratory nerves, respiration was continued for a while, though with some difficulty, and the brain being uninjured, the mental faculties were apparently unclouded, till after the action of the diaphragm had become so enfeebled that he could not give utterance to what he evidently desired to express. But death ensued much more speedily than it usually does in cases of injury of the spinal marrow at the lower part of the neck. Patients generally live from one to two or three days, until death results from inflammation of the medulla and its membranes, as in Dr. Strobel's case and others. (Vide Sir Charles Bell's papers on the nerves, read before the Royal Society, London.) The circumstances of this case, however, account for its speedy termination. The laceration of the parts about the theca vertebralis (which was itself ruptured), was such as to cause much hæmorrhage, and the extravasated blood gradually forced its way up the canal until the spinal marrow was compressed at the origins of the phrenic nerves. The action of the diaphragm became irregular more than half an hour before death, and at last suddenly stopped, and the lungs ceased to be inflated, though the action of the respiratory muscles of the face and neck continued for some moments after this period. But the diaphragm is not the only muscle in action to sustain respiration under such circumstances. The dilatation of the chest

in inspiration is effected by the antagonizing action of the diaphragm and the external respiratory muscles. The contraction of the diaphragm increases the long diameter of the chest by forcing downwards the abdominal viscera, at the same time the serratus magnus, trepeziius, and sterno-mastoideus, elevate the ribs and sternum and broaden the thoracic cavity; inspiration thus being an active state, and requiring the co-operation or antagonism of two or more of those powerful muscles. Expiration succeeds by the reaction of the abdominal muscles, which forces up the diaphragm again into the chest, depresses the ribs and sternum, and thus diminishes the thoracic cavity in both its diameters. The action of these muscles, equally powerful, is necessary to a forcible expiration. But were no muscle to act except the diaphragm, as has often been supposed, a single inspiration could not be taken. The contraction of that muscle alone, would, indeed, increase the diameter of the chest in one direction; but if the ribs were not fixed by the external muscles, it would only serve to depress their borders and diminish the diameter in another direction—and nothing could be gained by the effort. On the contrary, expiration would be the result. Expiration in this case, however, is merely a passive state. The abdominal muscles are, in fact, dead, and there is no power left for expelling the air from the lungs, but the elasticity of the ribs and the gravity of the abdominal viscera reacting on the diaphragm.

It was particularly remarked by Sir Charles Bell, in a case of fracture of the sixth and seventh cervical vertebræ, that the patient had no power of forcibly expelling the air from the lungs, though "at each inspiration the chest heaved with a short and quick movement." His patient was observed to yawn naturally: but "when he is asked to cough, he pulls up the ribs and extends the chest, and lets them fall: he coughs, but not strongly: it is obviously by his power of raising the chest and giving elasticity to the ribs, and by the weight of the parts falling, that he is enabled to expel the breath. He cannot divide the expiration into two coughs, nor give two impulses to the air; but each time he coughs, the elevation of the chest must precede it." He was not observed to sneeze, and could not blow his nose; he wanted the power of forcibly expelling the air. In the case of J. N., I distinctly recollect his yawning. No observation was made as to the acts of coughing or blowing the nose; it is presumed, however, that they could not have been performed. Respiration, therefore, cannot be maintained by the diaphragm alone, neither can it be performed without the aid of this muscle.

To prove this position, Sir Charles Bell made the following experiment. "The phrenic nerves being first divided" (in an animal), "and then the spinal marrow cut across at the bottom of the cervical vertebræ, respiration was stopped in the chest; but there continued a catching and strong action at regular intervals in the muscles of the nostrils, face, and side of the neck. The main part of the apparatus of respiration was stopped, but these accessory muscles remained animated and making ineffectual endeavors to perform the respiration. When apparent death had taken place, the animal was so far reanimated by artificial breathing, that the act of respiration recommenced; the muscles on the face and neck

were restored to activity, and became subject to regular and successive contractions, as in excited respiration, whilst the chest remained at rest. These actions continued for a short time, and then ceased; but upon artificial respiration being again produced, the same results followed."

In the case related at the beginning of this article, it is well recollected that the muscles of the face, larynx and neck made repeated ineffectual efforts at respiration, after the action of the diaphragm had ceased and the chest was at rest. And the reason is obvious, when it is remembered that the par vagum and spinal accessory, which supply the larynx, sterno-mastoid and trapezius, arise from the medulla oblongata, and from the spinal marrow above the origin of the phrenic nerves. The latter were paralyzed by pressure of the spinal marrow at their roots, from the extravasated blood, while the integrity of the former was comparatively uninjured. These three nerves, with the external respiratory and portio dura of the seventh pair, combine the action of the larynx, sterno-mastoideus, trapezius, serratus magnus, and diaphragm, with the lungs, tongue and nostrils, in the function of respiration. These nerves give the first impulse to life in the infant at its birth, and they are the last to die. The mental faculties may be destroyed by wounds of the brain, and the whole system of nerves of voluntary motion and sensation paralyzed by apoplexy, yet so long as the medulla oblongata and the cervical spinal marrow remain intact, respiration will be maintained. The respiratory nerves, in fact, possess an independent vitality, and are capable of sustaining, for a time, the life of their organs, after, in other respects, the body is dead. "They are alive to impressions, and can be made to produce convulsions in the muscles they supply, after the other nerves are dead to the application of all stimuli."

"When we survey the full extent of the respiratory system of nerves," says Sir Charles Bell, "we are prepared to comprehend its importance to the continuance of life. The infant born without a brain can breathe if the origin of these nerves be entire. Deep wounds of the brain, though eventually fatal, are not necessarily or instantly so. The man wounded in the spine below the origins of the nerves we have traced, drags out existence for a few days; but a bruise on the part of the *medulla oblongata*, from which these nerves take their departure, is death in the instant; a breath is not drawn again.

"Now, since we find that many respiratory nerves depart from the same centre, and go out to all the parts of the muscular frame which move in respiration, we can better comprehend how injury of the medulla oblongata suppresses at once the act of respiration in the nostrils, throat and windpipe, as well as the action of the muscles both without and within the chest; even the *expression* in the agony of dying is, by the injury of the roots of all these nerves, suddenly interrupted, and actual death follows quickly, owing to the cessation of the respiratory functions."

"On the contrary, if other parts of the body are injured by disease or accident, death comes slowly from the rising inflammation, or the extension of the influence gradually over the system; at length the respiratory system partakes of the influence, the chest rises higher and more

frequently, an alarming symptom, when there is reason to fear approaching dissolution ; the throat is then affected ; the whole apparatus of respiration is violently agitated ; the chest, neck, lips, cheeks and eyelids, are wrought with terrible convulsions ; the breathing is about to stop ; the action returns with sudden and startling effort, and then ceases, the patient dying in the state of expiration, the muscles of inspiration being incapable of renewing the effort.

"If it be important to know the approach of danger, and to distinguish nervous agitation from the formidable symptoms of approaching dissolution, it is necessary to know the causes of these symptoms, otherwise the physician is no better than the nurse."

WM. WORKMAN.

Worcester, Dec. 28th, 1836.

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ARMY AND NAVY MEDICAL STATISTICS.

IN examining the reports of the different departments of the general government, at the opening of the present session of Congress, it is interesting to notice the condition of the Medical Staff in the Army and Navy, and the expense of supporting the hospitals established in various parts of the union, the existence of which is always depending immediately on the treasury.

The estimated expense of the five surgeons attached to the five recruiting stations of Boston, New York, Philadelphia, Baltimore, and Norfolk, is \$8,750 per annum. For the support of the surgeons stationed at the several navy yards, the following sums are required—viz. at Portsmouth, N. H., one surgeon at \$1,800 ; Boston, one surgeon at \$1,800, and two assistant surgeons at \$950 each. The hospital requires one surgeon at \$1,075, and an assistant surgeon at \$950 ; a steward at \$350 ; two nurses at \$120 each, and two washers at \$96 each, besides a cook.

At the New York navy yard, one surgeon at \$1,800, and two assistants at \$950 each. The hospital establishment is organized precisely as at Boston, at precisely the same cost. Such, too, is the fact with regard to Philadelphia, with a few exceptions. There is there but one assistant surgeon. The naval asylum and hospital bears a striking resemblance to the one in this neighborhood.

At the Washington navy yard, there is no hospital. One surgeon and one assistant are the only medical officers on duty, whose compensation is like that at all other stations.

The Norfolk yard has one surgeon and two assistants, and also a hospital with two medical officers, beside a lieutenant attached to it, at the annual rate of \$1,500. At Pensacola the same number of medical officers are maintained as at Boston, with a similar hospital. An increase of \$3000 at two hospitals has been caused by the addition of a lieutenant at Philadelphia and Norfolk, who seem to act as governors.

The Secretary of the Navy says that \$3,200 is required for the commission of two surgeons waiting orders. It should be mentioned that the surgeons on duty at Baltimore and Charleston, S. C., have a compensation of only \$1500.

Very liberal expenditures were made the past year for the following benevolent purposes, viz.

1st. For erecting and furnishing a new hospital building, and for a dwelling for an assistant surgeon ; for the repairs of the present buildings ; and for all expenses upon their dependences, near Pensacola	\$47,500
2d. For erecting a sea-wall to protect the shore ; for enclosing the hospital grounds ; for completing the basement of south wing ; for repairing damages sustained from a recent gale ; and for all other expenses upon the dependences of the hospital near Norfolk	18,000
3d. For graduating and enclosing the grounds about the naval asylum near Philadelphia, and for all other expenses upon the building and its dependences	9,960
4th. Towards an extension of the hospital building near Brooklyn, New York ; for enclosing the grounds, and for all other expenses upon its dependences	66,000
5th. For the completion of the present hospital building near Boston, and for all expenses upon its dependences	1,350
Total for hospitals	\$142,810

We can only make room for an item in relation to the estimated cost of medical and hospital stores for one ship of war, for 1837—the frigate *Macedonian*, which is fixed at \$4000, showing that the government never stint the sick or send their ships to sea in an unprovided state for the comfort of disabled seamen.

A most praiseworthy provision has been made for the widows of deceased surgeons. The alphabetical list of pensioners runs thus : Juliana Burchmore draws \$32.50 monthly ; Maria Babbit, \$25 ; Eliza M'Cloud, \$15 ; Ellen Dix, \$25 ; Mary Griffin, \$25 ; Harriet Kissam, \$25 ; Phebe Montgomery, \$25 ; Georgia A. Peaco, \$25 ; Maria Page, \$25 ; Catharine S. M. Ray, \$35 ; Charlotte M. R. Thorn, \$25.

Since the first of December, passed assistant surgeon Geo. W. Palmer has died, at St. Simon's, Geo. ; but no one has resigned.

In the army there are one surgeon general, fifteen surgeons, and sixty assistant surgeons.

As soon as other documentary information of a veritable character shall have been received, it is our intention to detail the essential facts, in order, if possible, to put our professional readers in possession of these statistical items, which, perhaps, may be essentially serviceable to some, who otherwise could not readily procure this kind of information.

It is gratifying to observe that the surgeons of the navy, finally, enjoy something like a decent support, which for a long time was denied them, through the parsimonious and contracted policy of those who should have better represented the people who placed them in Congress. The generosity of the government in pensioning the otherwise destitute widows of deceased medical officers, is honorable to the national character.

MASS. GENERAL HOSPITAL.

DEC. 31. *Operation for Popliteal Aneurism—Tumor of the Face.*—There were two very interesting operations at the hospital on Saturday, Dec. 31. The first was for popliteal aneurism. The patient, an Englishman, 50 years of age, has lately been employed as prompter at one of the Theatres in Boston. His history is nearly as follows. At the age of 20 he was in the English Navy as Midshipman—had the yellow fever in the West Indies, which left him, according to the opinion of his physician, with diseased liver. Upon his recovery from this affection, he became acquainted with the famous sportsman, Capt. Barclay, who incited him to various pedestrian feats for wagers. At the age of 23, went on to the stage as tragedian—still, however, continuing his pedestrian feats under the encouragement of several of the sporting nobility of England. Before each trial he went through a process of training, sometimes for two or three months. His last feat was the walking 500 miles in 500 successive hours—one mile each hour. After this he was much exhausted and ill for some days. His manner of life has always been very free, except when training. He has always used much violent exercise. Ten years since, he came to this country, and has performed at various theatres. Four years since he was attacked very violently with rheumatism in both the lower extremities, from constant exposure on the stage without sufficient clothing. He has been very subject since to attacks of the same nature, and on this account has lately relinquished the stage and taken the situation of prompter—the duties of which, however, are very arduous, and requiring his attendance at the theatre from nine in the morning until ten at night.

In the course of the last winter he was attacked with a severe erysipelatous inflammation of the legs, on the left attended with ulcerations. Latterly, as regards eating, his habits have been abstemious—but, as he says, on account of fatigue, the theatre at the same time being very cold, he is obliged to take three or four glasses of brandy and water daily. Three weeks since, when at a rehearsal, after having been two hours in a sitting position, he was suddenly seized on rising with a cramp-like pain in the ham, extending up and down the limb. On examination of the part, he discovered a small, hard tumor in the popliteal space, about the size of a hazel nut. He continued his duties, however, during the day, and at night made some hot applications to the limb, which, as he thought, dispelled the tumor. Three days subsequent, he had a similar attack, with a similar result.

Eight days ago, he considered himself perfectly well; walked to the theatre and about the town during the day; but on rising from his chair after the performance in the evening, he was seized again with a violent pain in the leg, and on examination found the tumor of the same size as on the last attack. He was immediately assisted home, and had resort to the remedies used on a previous occasion, but without experiencing any relief. The pain continued, and at times was most excruciating. He still pursued his avocation at the theatre until five nights since, when from inability to walk, he was carried home, and a physician (Dr. Hayward) called. At that period the tumor was about a third its present size.

Now, on examination, the following appearances are presented: patient five feet eleven inches in height; has apparently the requisites for being a very powerful man—muscles greatly developed—very little fat.

In both legs the veins were much distended and varicose ; there are several scars on the left leg, which have remained since the ulcerations attendant on the erysipelas. The popliteal space of the right leg is occupied by a large pulsating tumor about the size of an orange. Upon compressing the femoral artery in the groin, the pulsations are immediately arrested, and the tumor itself gradually disappears ; returning, however, as soon as the pressure in the groin is taken off. Attending its pulsations, is a thrill which is conveyed to the fingers upon slight pressure being made on the surface of the tumor ; and on examination by the stethoscope, the peculiar blowing sound is heard, usually attendant on aneurismal tumors and diseased states of the valves of the aorta. In the present instance, however, the sound is rather more rough than usual, amounting to what is called by the French the "*bruit de râpe*." On examination of the heart with the stethoscope, its impulse is found to be remarkably feeble, and its pulsations are scarcely perceptible over the precordial region.

The patient has suffered very severely since his entrance, both in the tumor itself, and the surrounding parts ; and he expresses himself as very anxious for an operation to relieve his sufferings.

An operation having been determined upon, was performed by Dr. Hayward in the following manner. The patient being placed in a recumbent position, and the limb to be operated upon a little flexed and turned on its outside, an incision about four inches in length was made a little over and to the inside of the sartorius muscle—the incision commencing five inches below the crural arch. In making this incision, care was taken to avoid the great saphena vein, which could be seen at the lower and outer side of the wound—the skin being divided, and the sartorius muscles raised towards the outside of the limb, the sheath of the great vessels was exposed. This was now carefully opened, the artery laid bare, and a ligature carried round the artery by the common aneurismal needle. The latter part of the dissection was made chiefly with the handle of the knife. Upon the ligature being applied, the patient seemed to experience great pain, and made the same exclamations as has been lately described by Dr. Warren, as having taken place in the case of iliac aneurism. This pain, however, subsided soon after the ligature of the artery was accomplished. The wound was dressed with a few adhesive straps. Very little blood was lost in the operation, and the patient declared the pain of it to be much less than he had suffered in the same period of time during the preceding night.

The second operation was for a tumor of the face, of somewhat an anomalous character, situated just under the socket of the right eye. The patient was a farmer, 51 years of age, and had but lately been freed from some ulcerations in the neck, of a suspicious character. For the last two or three years, his health has not been good. His chief troubles have been a diseased state of the alimentary canal, attended with dizziness, pain in the head, &c. Three months since, he felt a slight uneasiness in the external corner of the right eye, as if a grain of sand had been lodged there. Very shortly afterwards, a small hard tumor was discovered just below the under eyelid, and on the edge of the socket. The tumor was not moveable, and not attended with pain. From that time to the present, it has gradually increased, extending inwards towards the nose and outwards towards the external angle of the eye ; above, it rises into the socket, so as to press the eyeball upwards and outwards, and partially closes the

lids. With the increase of the tumor, it has also become more painful, the pain extending in different directions over the face.

Dr. Warren operated on the tumor in the following manner. A transverse incision being made over it, and the integuments raised, dissection was made carefully around it down to the bone. On one side the tumor seemed to spring from the periosteum; but on dissecting it up, the bone was found rough and jagged, and under the centre of the tumor an opening was discovered communicating with the antrum. The tumor being removed, the rough and jagged portions of bone were cut off with the bone forceps; the edges of the wound were brought together by sutures.

In all probability the tumor had its origin in the antrum. No symptoms, however, could be gathered previous to the operation, to lead to this diagnosis. Laying open the parts was the only means of discovering the true state of things. It was not thought expedient to proceed to the very serious operation, which perhaps the state of the case may at some future period require.

Vermont Asylum for the Insane.—The trustees of this Institution—Messrs. Samuel Clark, John Holbrook, Epaphros Seymour, and John C. Holbrook—announce that it is now ready for the reception of patients. It is located in Brattleboro', in the immediate vicinity of that pleasant village, and is under the superintendence of Wm. H. Rockwell, M.D., who has for several years past been connected with the well-known Retreat for the Insane at Hartford, Ct. The terms are three dollars per week for convenient accommodations in the wings; and from five to twelve dollars for those who require a room in the centre building.

A. Hybrid.—Brandeth, the fabricator of grandfather pills—a transatlantic adventurer—a nostrum monger—a blower of his own brazen trumpet, who will unquestionably pocket a fortune quite equal to Swaim's, by practising upon the gullibility of the ignorant, has issued a prospectus of a weekly Journal, to be issued in January, called *The Brandethian Weekly Journal*—to treat of news, domestic economy—meaning buying the editor's quack medicines, of course—and all other things in general. The scheme is a grand one. The imposition is excellently devised. Nothing is too absurd or too monstrous for this intellectual age.

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There are more than a hundred names on the Medical Journal list of subscribers, which we are under the necessity of erasing on account of the non-payment of subscriptions. This method has been repeatedly adopted, as experience has taught us that many of such delinquents are so from choice, and that the sooner we stop sending them the Journal, the smaller will be our loss. This is particularly true with reference to distant States, in some of which, a pretty extensive circulation of the Journal has resulted in an actual loss to the publisher. Subscribers at a distance will always be accommodated, in any reasonable manner, in the mode and time of making remittances; but as a collector cannot be sent to them, some effort on their part, with regard to payment, is indispensable to their reception of the Journal. There are also many accounts of long standing nearer home, which might be settled with little or no inconvenience. To the majority of our subscribers, however, these remarks have no reference. Their punctuality has sustained the Journal thus far, and that alone can ensure the continuance of the only periodical in New England devoted to medical intelligence and instruction.

DIED.—In Troy, N. Y. Moses Hale, M.D. 56.—In Cumberland, R. I. Dr. C. Lamb.

Whole number of deaths in Boston for the week ending January 7, 25. Males, 11—females, 14.

Liver complaint, 1—consumption, 4—bursting bloodvessel, 2—infantile, 4—typhus fever, 3—abscess, 1—accidental, 1—child-bed, 1—lung fever, 2—scald, 1—old age, 1—influenza, 2—inflammation of womb, 1—decline, 1—stillborn, 1.

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Jan 20—Iyep

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Boston, Oct. 7, 1836.

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Nov. 30.

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